42-inch 3D-Intelligent Display

42-3DC601/00

42-3DW601/00

42-3DC602/00

42-3DW602/00

User Manual

Philips 3D Solutions

Document Information

Info	Content
Title	42 inch 3D Display, User Manual (9922 159 01 24 1 060322)
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Electrical Safety Warnings

Warning this is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

This display is supplied with a 3-wire power cord. Under no circumstances should the earth wire be disconnected.

To prevent possibility of shock hazard do not expose the display to moisture.

Only qualified service personnel should open the casing cover.

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1 Introduction

The 42-inch display from Philips 3D Solutions features superior lens design, rendering, and manufacturing processes. The lens design minimizes cross talk, creating highly distinct views. The 42-3DC601/00 and 42-3DC602/00 are designed for maximal viewing comfort. The 42-3DW601/00 and 42-3DW602/00 are designed for maximal WOW experience. The display's 2D-plus-depth rendering interface is open, allowing maximum flexibility. No matter what sort of Philips 3D Solutions display is used, the content does not need regeneration again. What's more, the rendering hardware sits inside the display, allowing for maximum optimisation of the algorithm. The manufacturing process is streamlined for high accuracy -to the micrometer- and therefore no variation from display to display. Philips' goal is to be able to produce large numbers of 3D displays to the highest standards.

The Display Control Tool can be used to change the depth offset, the depth range, the contrast and the brightness.

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2 Product features

2.1 Global product features

Multi-view Lenticular Display

- 9 view autostereoscopic 3D display
- Non-switchable lenticular technology
- Optimal viewing distance: 3 meters.
- Wide comfort zone for 3D perception
- Full brightness, full contrast
- 2D-plus-depth input in 3D mode
- Protective sheet at the front side of the display

Advanced display signal processing engine

- Integrated 3D display processing hardware
- Open 3D data interface
- 2D-plus-depth converted to 9 different views and interwoven into a 3D image
- Rendering algorithm is tuned for lenticular optical behaviour
- Two modes:
  - 3D rendering mode
  - 2D transparent mode with picture quality improvement filter

Connectivity

- Display control via DDC/CI channel; no additional RS232 cable needed
- AC switch
- A LED indicates power on and standby mode
- Prepared for remote control

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2.2 Technical aspects and details

Group	Item	42-3D #
LCD panel	Type	TFT LCD
	Resolution	1920 x RGB x 1080
	Pixel pitch	0.4845 mm x 0.4845 mm
	Effective viewing area	930.24 mm x 523.26 mm
	Size	42''
	Contrast Ratio	1000:1
	Aspect Ratio	16:9
	Brightness	460 cd/m^2
	Response time	8 ms
	Refresh rate	60 fps
	Display colours	16.7 M (8 bits RGB)
	White chromaticity	Wx: 0.285 Wy: 0.293 (at 9300°K)
Physical	Weight (including table stand)	42-3DC #: 26.5 kg 42-3DW #: 29.5 kg
	Dimensions (WxHxD)	1125 x 611 x 120 mm
	Package dimensions (WxHxD)	1176 x 791 x 318 mm
	Mounting	Table stand or wall mounting
	Power Consumption	230 W
	Power Consumption standby	2.5 W
	Temperature operating	0 - 35 °C
	Relative humidity	20 % to 80 %
	System MTBF	50K hrs
	Mounting angle	0 - 10° from vertical
Interface	Connector	DVI-D single link
	Voltage	110 V 60Hz / 230 V 50 Hz

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3 Scope of supply, Set up and mounting

3.1 Scope of Supply

The contents of the box:

- Display 42-3D #
- Table stand
- 3 Mains cords (USA, EU and UK)
- DVI cable
- CD ROM with:
  - Display Control Tool
  - 3DS Media Player
  - User manuals
  - 3D Sample content
- Printed version of the Display user manual (this manual)
- Cardboard box with cushions

The following items can be purchased separately:

- Wall mounting bracket
- Prepared for Remote Control

3.2 Safety precautions

Read and follow these instructions when connecting and using your computer display:

- Warning this is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.
- This display is supplied with a 3-wire power cord. Under no circumstances should the earth wire be disconnected.
- Unplug the display if you are not going to use it for an extensive period of time.
- Unplug the display if you need to clean it with a slightly damp cloth. The screen may be wiped with a dry cloth when the power is off. However, never use alcohol, solvents or ammonia-based liquids.

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- Consult a service technician if the display does not operate normally when you have followed the instructions in this manual.
- Only qualified service personnel should open the casing cover.
- Keep the display out of direct sunlight and away from stoves or any other heat source.
- Remove any object that could fall into the vents or prevent proper cooling of the display's electronics.
- Do not block the ventilation holes on the cabinet.
- Keep the display dry. To avoid electric shock, do not expose it to rain or excessive moisture.
- If turning off the display by detaching power cable, wait for 6 seconds before attaching the power cable or DC power cord for normal operation.
- When positioning the display, make sure the power plug and outlet are easily accessible.
- When using the wall mounting bracket, always secure it tightly to the display with 2 screws.
- IMPORTANT: Always display alternating content with your application. If a still image in high contrast remains on the screen for an extended period of time, it may leave an 'after-image' or 'ghost image' on the front of the screen. This is a well-known phenomenon that is caused by the shortcomings inherent in the LCD technology. Be aware that the after-image symptom cannot be repaired and is not covered under warranty.

3.3 Installation locations

- Avoid exposure to heat and extreme cold.
- Do not store or use the product in locations exposed to heat, direct sunlight or extreme cold.
- Avoid moving the product between locations with large temperature differences. Choose a site that falls within the following temperature and humidity ranges.
  - Temperature: 0-35°C
  - Humidity: 20-80% RH
- Do not subject the product to severe vibration or high impact conditions. Do not place the product inside a car or boot.

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- Take care not to mishandle this product by either knocking or dropping during operation or transportation.
- Do not store or use the product in locations where there is a high level of humidity or in dusty environments. Do not allow water or other liquids to spill on or into the product.

3.4 Mounting

The display can be placed standing on a table stand or hanging against the wall. Table stand is included; the wall mounting bracket can be purchased separately.

3.4.1 Fitting the table stand

Use only the stand provided with the set, making sure that the fixings are properly tightened. Never use a makeshift stand, or legs fixed with woodscrews.

3.4.2 Using the wall mounting bracket

The standard VESA mount holes on the wall mounting bracket allow the user to mount the Philips 3D display on any VESA standard accessories.

Important: Use a VESA mount suitable for the weight of this 3D Display.

Always secure the wall mounting bracket to the display with 2 screws. This avoids dangerous situations of lifting the display out of the wall mounting bracket.

3.5 Positioning the display

For the best results, choose a position where light does not fall directly on the screen, and at some distance away from radiators or other sources of heat. Leave a space of at least 10 cm all around the TV for ventilation, making sure that curtains, cupboards etc. cannot obstruct the

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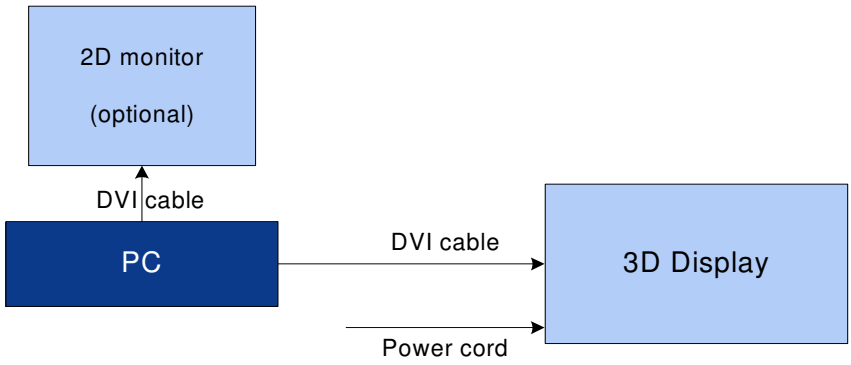
airflow through the ventilation apertures. The display is intended for use in a public places only and should never be operated or stored in excessively hot or humid atmospheres.

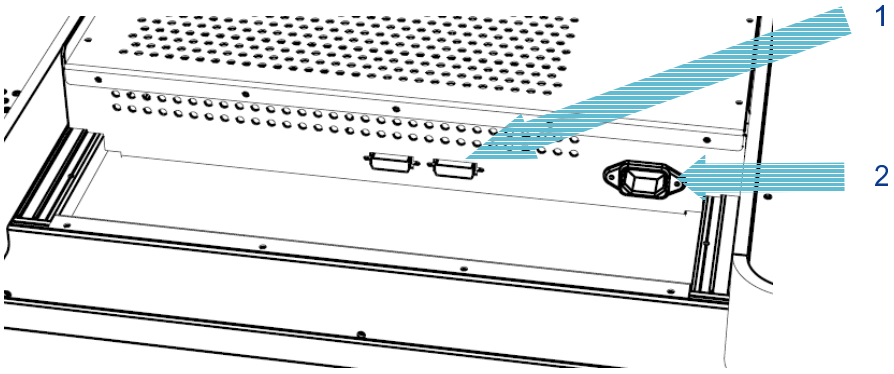
3.6 Connecting the display

NEVER (dis)connect DVI when your PC or Display are on.



A second 2D display may be connected to the PC

The next picture shows the backside of the display



Make sure the PC and Display are switched off!

1. Connect the PC via the DVI cable to the right DVI connecter (seen from the rear).
2. Connect the power cord.

There are 2 DVI connectors present at the back of the display. The right one is the input for DVI. The left DVI connector is always unused.

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3.7 Cleaning instructions

3.7.1 Professional application

Before cleaning the display, disconnect the power cord and DVI cable.

It is preferred to clean the front of the display with a cleaning product (Electrolube ASC, REF ASC250ml) and cloth (Texwipe type TXE1009 AlfaWipe white New York USA).

As an alternative, clean the front of the display with a solution of soft soap (e.g. liquid hand soap) and tepid water, using a soft cloth or sponge.

The rest of the display can be cleaned with a dry cloth.

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4 Software installation

This chapter contains the prerequisites for the PC hardware and the operating system for the software. First check if your PC complies with the requirements that are given in the next sections. Than follow the installation instructions, where you are guided step by step through the software installation procedure.

4.1 Minimum PC requirements

The PC must comply with the following requirements:

- Pentium 4, ≥ 3 GHz
- ≥ 512 MB internal memory
- 7200 rpm hard disk with 8 Mbyte cache (minimal sustained throughput 10 MB/s)
- CD/DVD ROM player
- Graphics card based on NVIDIA 6800 or 7800 chipsets

4.2 Prepare PC

Make sure that the following software is installed on the PC before connecting the 3D Display to the PC:

- Windows XP SP2
- NVIDIA Display driver
- Video decoder (optionally audio decoder)

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5 Approbations

5.1 CE

EN 60950-1:2001
EN 55022: 1998-09; cor 1: 1999-08; A1: 2000-10; A2: 2003-01; cor 2: 2003-07
EN 55024: 1998-09; A1: 2001-10; A2: 2003-01
EN 61000-3-2: 2000-12
EN 61000-3-3: 1995-01; A1: 2001-06

5.2 USA and Canada

cETLus listing
UL 60950
Can/CSA 60950
FCC part 15B: 2004-10 Class A
ANSI C63.4: 2001; 2003

5.3 CB Certificate

IEC 60950-1: 2001 (1st edition)
IEC 61000-3-2: 2000-08; A1: 2001-08; A2: 2004-10
IEC 61000-3-3: 1994-12; A1: 2001-01

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6 Environmental

Condition	Operating	Shipping / storage
Temperature	0 °C to 35 °C	-20 °C to 60 °C
Humidity	20 % - 80 % No condensation	0% - 95 % No condensation
Air pressure	600 – 1100 mBar	300 – 1100 mBar

The display is only used indoor.

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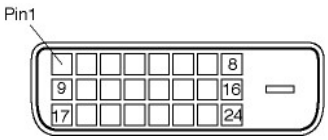
7 Interfaces

7.1 DVI-in



Pin	Signal	Pin	Signal	Pin	Signal
1	T.M.D.S. Data2-	9	T.M.D.S. Data1-	17	T.M.D.S. Data0-
2	T.M.D.S. Data2+	10	T.M.D.S. Data1+	18	T.M.D.S. Data0+
3	T.M.D.S. Data2/4 Shield	11	T.M.D.S. Data1/3 Shield	19	T.M.D.S.Data0/ 5 Shield
4	No connect	12	No connect	20	No connect
5	No connect	13	No connect	21	No connect
6	DDC Clock	14	+5V Power	22	T.M.D.S. Clock Shield
7	DDC Data	15	Ground (for +5V)	23	T.M.D.S. Clock+
8	No connect	16	Hot Plug Detect	24	T.M.D.S. Clock-

The DDC Clock and the DDC data are used by the Display Control Tool to control depth and colour settings in the display.

7.2 LED

LED Color	Status
Red	Display is in standby mode. No DVI clock is present.
Green	Display on

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8 Trademarks, Copyrights and disclaimer

Specifications are subject to change without notice.

Trademarks are the property of Koninklijke Philips Electronics N.V. or their respective owners.

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9 Manufacturer / Support

Philips 3D Solutions combines the vibrancy of a young company with experience that stretches back to the earliest days of the modern 3D movement. Our skills, combined with the resources of Philips, mean that Philips 3D Solutions can support your business at every link of the 3D value chain. We provide complete 3D solutions - everything from displays and signal processing to licensing of our state-of-the-art technology.

More than any other factor, the skills of our people have given Philips 3D Solutions a head start in 3D. Some of our colleagues have been working in 3D since the mid-1990s. The intellectual capital that we have accumulated is constantly being reinvested in new projects and ideas, helping Philips 3D Solutions strengthen its position as a leader in 3D technology.

We are part of the family of Philips, one of the world's biggest electronics companies. Philips 3D Solutions can rely on the expertise and worldwide distribution networks of Philips, allowing us to match your requirements and needs. We can offer a complete solution, which in the 3D world is not just a matter of convenience, but of quality. As your partner in design, Philips 3D Solutions can help you shorten your time to market.

The team of Philips 3D Solutions shares your excitement about the world of 3D technology, and we stand ready to forge a business relationship with you. We hope this manual answers your questions about Philips 3D Solutions. If you still have questions, or if you wish to discuss possible business opportunities with us, one of our representatives will be happy to speak with you.

Any questions? Please contact
Philips 3D Solutions
Email 3DSolutions@philips.com

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10 References

The next references are not normative but informative.

Description
VESA Display data channel standard; Version 3; December 15, 1997
VESA Display data channel command interface (DDC/CI) standard; Version 1; August 14, 1998
Digital Visual Interface DVI; Digital Display Working Group; Revision 1.0; April 02, 1999
VESA enhanced extended display identification data standard; Release A, Revision 1; February 9, 2000
ITU-R BT.709.4; Parameter values for HDTV standards for production and international programme exchange;

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